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— 国際調査報告書
- 2文字コード及び他の略語については、定期発行される各PCTガゼットの巻頭に掲載されている「コードと略語のガイダンスノート」を参照。

(54) Title: WORK-HARDENED MATERIAL FROM STAINLESS STEEL

(54) 発明の名称: ステンレス鋼の加工硬化材

(57) Abstract: A work-hardened material from a stainless steel sheet, which has a chemical composition, in mass %, that C: 0.15 % or less, Si: 1.0 % or less, Mn: 1.0 % or less, S: 0.005 % or less, Cr: 10 to 20 %, Ni: 0.5 % or less, Al: 0.001 to 0.05 %, and optionally, one or more of Mo: 0.5 to 2.0 %, Cu: 0.5 to 3.0 % and Nb: 0.05 to 1.0 %, wherein Al_2O_3 based and/or $Al_2O_3 \cdot MgO$ based inclusions having a particle diameter $\leq 10 \mu m$ are dispersed in a cleanliness $\leq 0.06 \%$, and the material exhibits enhanced strength due to a work ferrite structure. The above work-hardened material exhibits an 0.2 % offset yield strength as high as 700 N/mm² or higher and also is excellent in bending workability, and thus can be suitably used as parts or a structural material for a household electrical appliance, an OA equipment and the like.

(57) 要約: C:0.15質量%以下, Si:1.0質量%以下, Mn:1.0質量%以下, S:0.005質量%以下, Cr:10~20質量%, Ni:0.5質量%以下, Al:0.001~0.05質量%, 必要に応じ Mo:0.5~2.0質量%, Cu:0.5~3.0質量%, Nb:0.05~1.0質量%の1種又は2種以上を含むステンレス鋼板である。粒径 $\leq 10 \mu m$ の Al_2O_3 系及び/又は $Al_2O_3 \cdot MgO$ 系介在物が清浄度 $\leq 0.06\%$ で分散し、加工フェライト組織により高強度化されている。700N/mm²以上の高い0.2%耐力を示しながら曲げ加工性に優れ、軽量化が要求される家電製品, OA機器等の部品, 構造材として使用される。

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2004/011410

A. CLASSIFICATION OF SUBJECT MATTER

Int.Cl⁷ C22C38/00, C22C38/40, C22C38/48, C21D9/46

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Int.Cl⁷ C22C38/00, C22C38/40, C22C38/48, C21D9/46

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Jitsuyo Shinan Koho 1922-1996 Toroku Jitsuyo Shinan Koho 1994-2004

Kokai Jitsuyo Shinan Koho 1971-2004 Jitsuyo Shinan Toroku Koho 1996-2004

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

WPI

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JP 4-65141 B2 (Nippon Steel Corp.), 19 October, 1992 (19.10.92), Full text (Family: none)	1-3
A	JP 2-18379 B2 (Nippon Steel Corp.), 25 April, 1990 (25.04.90), Full text (Family: none)	1-3
A	JP 8-246105 A (Nippon Yakin Kogyo Co., Ltd.), 24 September, 1996 (24.09.96), Full text (Family: none)	1-3

☒ Further documents are listed in the continuation of Box C.☐ See patent family annex.

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"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

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Date of the actual completion of the international search
27 October, 2004 (27.10.04)Date of mailing of the international search report
16 November, 2004 (16.11.04)Name and mailing address of the ISA/
Japanese Patent Office

Authorized officer

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INTERNATIONAL SEARCH REPORT

International application No.

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JP 5-255816 A (NKK Corp.), 05 October, 1993 (05.10.93), Full text (Family: none)	1-3
A	JP 2002-194505 A (Sumitomo Metal Industries, Ltd.), 10 July, 2002 (10.07.02), Full text (Family: none)	1-3